

MySQL for Database Administrators Ed 4

Duration: 5 Days

What you will learn

The MySQL for Database Administrators course teaches DBAs and other database professionals how to maximize their organization's investment in MySQL and about the benefits of using the MySQL Cloud Service. Learn to configure the MySQL Server, set up replication and security, perform database backups, optimize query performance, and ensure high availability.

Through a variety of realistic, hands-on activities, expert MySQL instructors will teach you to install, configure, secure, and maintain your database server which you can deploy on-premise or as a MySQL Cloud Service instance.

Learn To:

- Install and configure MySQL Server and client programs.
- Recognize the key components of the MySQL architecture.
- Secure your server.
- Troubleshoot server slowdowns and other issues.
- Improve query performance.
- Configure and administer a variety of replication topologies.
- Understand the benefits of MySQL Cloud.

Benefits To You:

After taking this course, you will be equipped to use all the features of MySQL to get the best out of your Web, Cloud, and embedded applications, whether you work with the command line or graphical tools such as MySQL Workbench and MySQL Enterprise Monitor, whether you use on-premise or MySQL Cloud-based instances, and whether your challenge is complex replication requirements, or highly-tuned transactional systems.

Audience

- Database Administrators
- Database Developers
- Technical Consultant

Related Training

Required Prerequisites

Should be knowledgeable with Joining tables

Should be knowledgeable with MySQL data types and executing basic DDL and DML queries using SQL

Should be knowledgeable with relational database concepts and using the mysql command-line client

MySQL Fundamentals Ed 1

Suggested Prerequisites

MySQL for Developers

MySQL for Developers Ed 2

MySQL for Developers Ed 3

Course Objectives

Define and implement a backup strategy

Perform physical and logical backups of your data

Describe MySQL replication and its role in high availability and scalability

Configure simple and complex replication topologies

Administer a replication topology

Install the MySQL server and client programs

Upgrade MySQL on a running server

Describe MySQL architecture

Explain how MySQL processes, stores, and transmits data

Configure MySQL server and client programs

Use server logs and other tools to monitor database activity

Create and manage users

Protect your data from common security risks

Identify and optimize poorly-performing queries

Troubleshoot server slowdowns and other common problems

Gain an understanding of MySQL Cloud

Course Topics

Introduction to MySQL

- MySQL overview
- MySQL Enterprise Edition
- MySQL on the Web
- MySQL in the Cloud
- The MySQL community

Installing MySQL

- Installing MySQL
- Installed Files and Directories
- Initial Configuration
- Starting and Stopping MySQL
- Upgrading MySQL

MySQL Architecture

- Architectural Overview
- How MySQL Transmits Data
- How MySQL Processes Requests
- How MySQL Stores Data
- Tablespaces
- Redo and Undo Logs
- How MySQL Uses Memory
- Plug-in Interface

Configuring MySQL

- Server Options, Variables, and the Command Line
- Option Files
- System Variables
- Launching Multiple Servers on the Same Host

Monitoring MySQL

- Monitoring MySQL with Log Files
- Monitoring MySQL with Status Variables
- Monitoring MySQL with Performance Schema
- MySQL Enterprise Audit
- MySQL Enterprise Monitor
- Monitoring User Activity

User Management

- MySQL Privilege System
- Creating and Modifying User Accounts
- Configuring Passwords and Account Expiration
- Authentication Plug-Ins
- Granting Permissions
- Grant Tables
- Resetting a Forgotten Root Password

MySQL Security

- Security Risks
- Network Security
- Secure Connections
- Password Security

Operating System Security
Protecting Against SQL Injections
MySQL Enterprise Firewall

Maintaining a Stable System

Stability
Why Databases Fail
Capacity Planning
Troubleshooting
Identifying the Causes of Server Slowdowns
InnoDB Recovery

Optimizing Query Performance

Identifying Slow Queries
The EXPLAIN statement
Working with Indexes
Index Statistics

Backup Strategies

Understanding Backups
Backup Techniques
Creating a Backup Strategy

Performing Backups

MySQL Backup Tools
Raw Backup Methods
Techniques that Use the Binary Log

Configuring a Replication Topology

Overview of Replication
Replication Conflicts
When to Use Replication
Configuring Replication

Administering a Replication Topology

Failover
MySQL Utilities
Replication Threads
Monitoring Replication
Troubleshooting Replication

Group Replication

Overview
Single-Primary and Multi-Primary Modes
Configuring Group Replication
Monitoring Group Replication

Conclusion

Course Overview
MySQL Curriculum
Course Evaluation
Thank You!

